

### REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections. Claims 1-7 have been amended and claims 8-14 have been newly presented. It is respectfully submitted that no new matter has been added in this amendment. Favorable reconsideration of the application in light of the following detailed arguments is respectfully requested.

### INDICATION OF ALLOWABLE SUBJECT MATTER

The Examiner has indicated that claims 3-5 and 7 would be allowable if rewritten in independent form to include the limitations of their base claims and any intervening claims, and to correct the deficiencies under 35 USC 112, second paragraph. For the reasons stated below it is respectfully submitted that broader claim coverage is available.

### OBJECTIONS TO THE SPECIFICATION

The abstract of the disclosure was objected to for being of undue length. In response thereto, the abstract has been deleted herein and a new abstract has been included which is less than 150 words. In view of the above, withdrawal of this objection is respectfully requested.

Additionally, minor corrections to the specification have been made for clarification. Specifically, the specification refers to at least one additional sour gas separation unit. For clarity it has been amended to define an additional sour gas separation unit and possible further sour gas separation units. It is respectfully submitted that no new matter has been presented in these amendments as the subject matter was already present.

The absorbent for the invention can be either chemically active or physically active, chemically non-active, which is explained in the text and has been amended in the claims and in the description. It is respectfully submitted that this does not

constitute new matter as it is merely clarification of the text already present, and one skilled in the art would have recognized this fact.

#### CLAIM OBJECTIONS

Claim 2 was objected to for a spelling error. This spelling error has been corrected in the claim and in the specification. In view of the above, reconsideration and withdrawal of these claim objections is requested.

It should be further noted that applicant has substituted the term "withdrawal" for "removed" to characterize the process which is defined usually by an absorption, while the term "separation" is used for the sour gas separation and Claus process (2 and 22).

#### REJECTION OF CLAIMS UNDER 35 USC §112

Claims 1-7 were rejected under 35 USC 112, second paragraph for being indefinite. Specifically, the Examiner made several objections again claim 1 for lack of antecedent basis.

Claim 1 has been amended herein in a manner which is believed to correct those deficiencies. In addition, a few further changes have been made to correct other potential inconsistencies in the claims. In view of the above, reconsideration and withdrawal of this rejection are respectfully requested.

#### REJECTION OF CLAIMS UNDER 35 USC §102

In the outstanding Office Action, the Examiner rejected claims 1 and 2 as being anticipated by Madgavkar (US 4,382,912)

This reference discloses in claim 1: A process for purifying a hydrogen-sulfide containing *carbon dioxide gas stream*, which comprises ...". As defined in independent claim 1 of the present invention, the current invention defines a process for shifting sour gas portions contained *in a natural gas* (1) from a first sour gas separation unit (2) to a further sour gas separation unit (22) with free capacities, ... ". The gas to be purified is mainly carbon dioxide (at least 20 mol%, claim 1) in the applied reference and a natural gas (claim 1) in the current case. From this fact alone the present invention as claimed

is not disclosed in the prior art reference as a different gas is to be cleaned, and therefore the present invention as claimed is not anticipated by the applied reference.

The invention of the Madgavkar selectively removes hydrogen sulphide from a carbon dioxide containing gas. The disclosed process uses an oxidation process (24) for a partial stream of the hydrogen sulphide, which is contained in the carbon dioxide stream. The process further uses a scrubber (30), which rinses with water. The process uses a bridging of the oxidation reactor with the purpose to mix the sulphur dioxide with residual hydrogen sulphide for the Claus process.

To the contrary, the present invention, as claimed, is designed to control the novel bridging of a known removal process for sour gases to adapt the capacities of a plurality of sour gas separation units. The claim defines a removal of sour gas for a sour gas containing gas stream and not an oxidation process for contained hydrogen sulphide. Oxidation processes are only contained in the sour gas separation units (2 or 22), which are not part of the invention by themselves. Most importantly, the Claus steps in applied reference are carried out in a series process flow (62 and 76), to improve efficiencies and **cannot** be bridged. The Claus steps of the current invention (in the sour gas separation units) are carried out in a parallel manner (2, 22) to allow a bridging to adapt for their capacities.

In view of the above, it is respectfully submitted that the applied reference does not in any way anticipate that a bridging of the sour gas removal is possible, because it is not clear how the removal process and the sour gas separation units in the current invention can be handled if their capacities are adapted.

It should be further noted that a preferred embodiment of the present invention discloses the removal of the sour gas by a chemically active absorbent (claim 2), not the scrubbing with water to remove acidic gases. Removal processes for sour gases by absorbing solvents are completely different to handle than a scrubbing of acidic gases with water. A removal for sour gases by absorbents must always be controlled by the pair absorption-desorption, whereas a scrubbing with water can easily be carried out without any further considerations.

Additionally, the physical properties of the carbon dioxide containing gas in the invention of the applied reference and the natural gas of the current invention are

different, which has the consequence that the behavior of the process in claims 1 and 2 in the current invention cannot be predicted from the disclosure of Madgavkar.

In light of the above, it is respectfully submitted that independent claim 1, and claim 2 which depends therefrom, is allowable over the applied art of record.

#### REJECTION OF CLAIMS UNDER 35 USC §103

Claim 6 was rejected under 35 USC 103 as being unpatentable over Madgavkar in view of US 4,976,935 to Lynn.

It is respectfully submitted that claim 6 is allowable over the applied reference in view of its dependence from claim 1, which is believed to be allowable for the reasons given above. However, claim 6 is believed to be further allowable over the applied references.

Madgavkar, as it related to the present invention, has been discussed hereinabove. Lynn uses a settler and surge tank (31), and not a flash unit. Although the released gas from this vessel is declared as a "flash gas [to furnace]", a flash vessel for a desorption by decompression is usually very different in operation than a settler and surge tank. This vessel (31) is employed, because the fluid stream already contains a considerable amount of a solid (sulphur). The resultant gas is declared a flash gas, although for instance its composition may vary, because the duration of the settling in the vessel (31) is not clear. Because of these differences, the flash step as disclosed in claim 6 of the current invention as desorption (15) is therefore not obvious to one skilled in the art.

SUMMARY

Claim 1 is believed to be allowable for the reasons given above. Claims 2 and 6 are believed to be allowable based, at least, upon their dependence from allowable claim 1. The remaining claims have already been indicated as allowable by the Examiner. Therefore allowance of the application with all of the pending claims is respectfully requested.

It is believe that the above amendments place the application in condition for allowance. Should the Examiner wish to modify the application in any way, applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,

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